

ADMINISTRATIVE RECORDS  
SF FILE NUMBER  
29.06.999

Table 1.0  
Radionuclide Concentrations in Various  
Waste Streams at the RFP<sup>(1)</sup>



SEMS  
1536418

Radionuclide Concentrations (pCi/l)

<u>Waste Stream</u>	<u>Sample No.</u>	<u>Process</u>	<u>Ann. Vol. Gal./yr</u>	<u>Onsite Disposal Loc.</u>	<u>Gross Alpha</u>	<u>Gross Beta</u>	<u>Pu-239</u>	<u>Am-241</u>	<u>U233,4</u>	<u>U238</u>	<u>H<sub>3</sub></u>
Quench Water	04900	Heat Treatment	40,000	Bldg. 374	130,000	140,000	0.75	-0.03 <sup>2</sup>	3400	50,000	100
Process Waste (Organics)	05250	Composite Waste	500,000	Bldg. 374	11,000	16,000	110	41	1600	8,300	-30
Process Waste (chemicals)	05320	Composite Waste	22,400	Bldg. 374	26,000	46,000	14	11	1400	5,800	-70
Wastewater Sludge	SP995B	Sewage/Treatment	78,000lb/yr	Mixed Waste	95pCi/g	78pCi/g	11pCi/g	2.2pCi/g	18pCi/g	33pCi/g	120
Wastewater Sludge	SP995D1	Sewage/Treatment	78,000lb/yr	Mixed Waste	130pCi/g	180pCi/g	7.4pCi/g	1.6pCi/g	24pCi/g	110pCi/g	120
Rags with TCE	09590	Clean. Paint. Tools	50lb/yr	Landfill	30pCi/g	1.4pCi/g	13pCi/g	0.43pCi/g	0.25pCi/g	0.40pCi/g	-730
Waste Oil	11120	Composite Waste Oil	26,400	Bldg. 774	2,500	5,100	-0.4	-1.3	360	2,800	60
Waste Solvent/organic	11170	Composite Solvents	100	Bldg. 774	1,100	980	-0.8	-1.2	120	810	-30
Sump Sludge	11890	Cooling Water Table	820lb/yr	Landfill	65pCi/g	110pCi/g	0.06pCi/g	-0.03pCi/g	7.2pCi/g	27pCi/g	30
Developer/Fixer Baths	13651	Photographic Enlargement	20	Bldg. 374	350	3,600	0.10	0.03	-0.9	0.11	90
Waste Oil	13700	Non line gen. in Manufac. Bldg.	550	Bldg. 774	74	28	-12	8.0	--	--	-80

999-6-0060-40003

<u>Waste Stream</u>	<u>Sample No.</u>	<u>Process</u>	<u>Ann. Vol. Gal./yr</u>	<u>Onsite Disposal Loc.</u>	<u>Gross Alpha</u>	<u>Gross Beta</u>	<u>Pu-239</u>	<u>Am-244</u>	<u>U233</u>	<u>U238</u>	<u>H<sub>3</sub></u>
Scintillation Fluid	03010	Medical Analysis Labs	100	Mixed Waste	4	73	0.02	0.0	1.1	2.7	2700
Kimwipes & Rags	04120	Machining of Metals	580lb/yr	Mixed Waste	1400pCi/g	2100pCi/g	0.01pCi/g	0.0pCi/g	130pCi/g	1100pCi/g	600
Coolant	041300	Lubricant for Machining	1,300	Bldg. 774	2,100	3,000	-0.2	0.08	1800	230	360
Waste Oil and Coolant	05170	Machining of Metals	1,980	Bldg. 774	18,000	33,000	0.46	0.67	440	3700	20
Waste Oil	0517001	Machining of Metals	1,980	Bldg. 774	10,000	17,000	1	2.4	1200	9200	50
Proc. Waste (Chemicals)	05230	Pumping Station	150,000	Bldg. 374	4,600	5,000	0.02	-2.4	510	3700	80
Proc. Waste (Chemicals)	05320	Pumping Station	22,400	Bldg. 374	3.6 x 10 <sup>7</sup>	4.6 x 10 <sup>7</sup>	1.4 x 10 <sup>4</sup>	1.1 x 10 <sup>4</sup>	1.4 x 10 <sup>6</sup>	5.8 x 10 <sup>6</sup>	--
Cemented Salt Residue	09140	Evaporation of Liquid	2 x 10 <sup>6</sup> lb/yr	Mixed Waste	240pCi/g	170pCi/g	160pCi/g	88pCi/g	25pCi/g	88pCi/g	1300
Nitric Acid (with Ag)	14000	Plating	150	Bldg. 374	16,000	24,000	0.61	0.56	2200	--	--
Oakite	14230	Caustic Cleaning	200	Bldg. 374	420	-300	0.12	-0.04	2.6	10	30
Waste Solvent	14510	Degreasing Metal Parts	55	Storage	1,900	5,600	3	1.7	220	1500	-60
Waste Acid	14570	Chemical Mill Beryllium	10	Bldg. 774	--	--	--	-0.06	14	51	-2.0

171-6-0060-40005

Table 1.0 (cont'd.)

<u>Waste Stream</u>	<u>Sample No.</u>	<u>Process</u>	<u>Ann. Vol. Gal./yr</u>	<u>Onsite Disposal Loc.</u>	<u>Gross Alpha</u>	<u>Gross Beta</u>	<u>Pu-239</u>	<u>Am-244</u>	<u>U233</u>	<u>U238</u>	<u>H<sub>3</sub></u>
Cutting Oil	14320	Machining Metal Parts	2,750	Bldg. 774	370	780	-0.4	4	3.2	82	20
Machine Coolant	14320	Machining Metal Parts	7,800	Bldg. 374	-46	1,600	0.28	0.13	-0.24	-0.1	70
Process Waste	14371	Filtered Liq. Composite Waste	955,400	Bldg. 374	2,900	7,200	-0.4	0.7	330	2600	270
Process Waste	14370	Filtered Liq. Composite Waste	955,400	Bldg. 374	933	1,600	-2.04	-0.02	180	1300	1100
Cyanide Rinse	14350	Cyanide Treat in Plating	11,300	Bldg. 374	260	430	0.23	0.09	52	390	180
Acid Rinse	14360	Acid lines in Plating	47,300	Bldg. 374	370	490	-0.12	-0.02	57	420	10
Spent Electrolyte	14650	Electrochemical Machining	100	Bldg. 374	3,700	7,500	-0.01	0.07	470	3400	480
Cleaning Solution (TCE and Oakite)	14660	Cleaning Metal Parts	1000	Bldg. 374	6	380	0.01	0.04	1.3	8.7	340
Rags (with paint thinner)	11070	Clean Paint brushes	200lb/yr	Mixed Waste	20pCi/g	38pCi/g	1.8pCi/g	0.38pCi/g	0.17pCi/g	1.2pCi/g	50
Paint Thinner	11080	Soak Paint	10	Bldg. 774	470	1,100	-0.1	2.2	54	510	0

- 1) Source of data is analysis of samples from "Waste Stream Identification and Characterization" Reports prepared by Rockwell/Weston.
- 2) Negative concentrations are indicative of insensitivity of sample analysis.  $\pm$  variability is wide on sample analyses.

777-6-0000 140003

April 20, 1977.

Colorado Department of Health  
4210 East Ninth Avenue  
Denver, Colorado 80206.

Re: Rocky Flats Waste Disposal

Gentlemen:

I strongly urge you to inquire into the unusual methods of waste disposal of materials, especially polluted or radioactive waters, from the Rocky Flats Plant, in the best interests of all Colorado citizens.

In the year 1961 when I was a Colorado State Patrolman on patrol of State Highway 30 (east of Buckley Naval Air Station) I had the opportunity to stop for a PUC check a Boulder County Milk Transport Truck that bore Boulder County license plates. The driver stated he was not hauling Boulder milk but rather 'polluted radioactive waters' from the Rocky Flats Plant to areas near the missile sites under construction for disposal. He said they dumped the polluted waters in any old valley or hole on the range by government agreement. A standard PUC advisory notice was completed and the truck released on Colorado 30. The trucks were noted to haul thousands of gallons of water to disposal between 1961 and approximately 1964.

I resigned from the Colorado State Patrol in 1961 to join the (Mintin Company as a Missile Site Manager) (U.S.) since continued construction in the area provided for better living wages paid than the State government. Upon completion of the sites on the Missile Range of Buckley Naval Air Station (Lowry Bombing Range) I moved to other employments in the area.

(DH, April 20, 1977.

After leaving the Martin Company in approximately 1962-63 and still being in the Colorado area for investment purposes I observed the same Boulder County Milk Transports (6-Wheelers) moving polluted waters into the Missile Range via Colorado 30 Highway. Since I owned Student Houses in Boulder, Colorado, I utilized large volumes of milk in business, but I made absolutely certain the milk was from a dairy (Watts-Hardy) that was not hauling polluted waters. The hauling of polluted waters from the Rocky Flats Plant continued, and I confirmed it was very dangerous material from a Army Reserve Officer friend who was employed at DDM. In approximately 1964, or later, when employed in other specialized law enforcement work, the milk company trucks were observed to be hauling the waters to old missile site silos or burial grounds near the sites on the Buckley Missile Range. A visitors trip to the old site areas recently confirmed my worst suspicions - all vegetation where the polluted water was dumped is still dead and the barren areas are spreading.

The water table at the old missile silo was approximately 17-20 feet below the surface, running from south to northwest per State water development engineers, and undoubtedly most of the southeaster Aurora area near the sites and areas south of Bennett Colorado are now polluted. These polluted areas were still photographed by myself for reference and having no one to advise my file is still pending action.

Therefore, after many visits to cattle ranchers and farmers that now operate the old missile site lands for farms, my worst fears are now evident. The cattle and crops that Colorado citizens ingest are undoubtedly from this contaminated water range. No one understood this problem in 1964, and now perhaps you can investigate and save a life. If people only knew what we drink in milk and water today - wow!

Sincerely, a concerned citizen,  
W. H. Wilson  
Colorado Notary Public Agent

cc: Mr. Tony Larsen, KOA News, 80203  
File, 80210.

Vera,

Recently, Greg Phebe and myself interviewed a gentleman who claims that various drainages and abandoned missile silos <sup>nearby head all</sup> were used for the disposal of waste materials. Apparently he was a State Trooper in the area during the early 1960's and claims that tanker trucks from Dow Chemical were told to dispose of their waste in a couple of missile silos in the area. From what he stated many trucks would only make it part of the way to the silos and dump in drainages along the way, including the drainages in Section 6.

He also claims that he went out with the state health people later with portable radiation detectors and found radiation at elevated levels on the surface (It was not clear exactly when or where this happened)

Since we have found elevated radon levels at lowy I am concerned that he may be right wRT disposal. The connection to Dow is also disturbing since they operated the Flats from the 50's - 70's.

I personally feel follow-up wRT this issue is needed, particularly with WAT to silos just 1/2

primarily owned. we will be performing  
isotopic analysis of heavy samples and  
should help us determine - waste from  
the Flats is present at heavy.

A PA/SI or general investigation of the  
lands in the area may be warranted.  
Some heavy citizens believe we ~~are~~ already  
have info in our possession that would  
implicate a Federal facility and believe  
we are covering up something. While  
this is certainly not true if we  
find a problem much later in the  
area it certainly will not look good.

Let me know what you think or  
if you need more specific information

Thanks

J. L. Howard 11/3/85  
x1533